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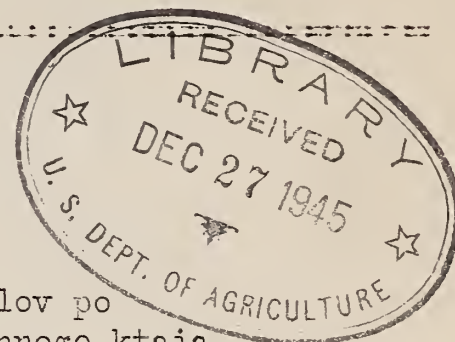
*Ramsey CE*  
*Appals*

SOIL CONSERVATION LITERATURE :-  
SELECTED CURRENT REFERENCES

Compiled By The Library Staff Of The Soil Conservation Service  
From Publications Received In The  
United States Department of Agriculture Library, Washington, D.C.

AUGUST 1936

PERIODICAL ARTICLES



Cover

Kabanov, N.E. Bibliograficheskaia Avodka materialov po rastitel'nomu i pochvennomu pokrobu Dal'nevostovhnogo ktaia za poslednee desiatiletie(1923-1933) Trudy Dal'nevost.Filiala Akad.Nauk SSSR Ser.Bot. 1: 433-568. 1935.

Bibliography of the materials on the vegetation and soil cover of the Soviet Far East for the last decade.  
In Russian.

Wing, A.S. Luck grows in clover. Country Home. 60(8): 16-17. illus. August 1936.

Discusses various species of clover as soil-building plants. States that "the practical value of the clovers depends on factors which are hidden in the soil that enfolds their roots - tiny bacteria that have the magic power possessed by few living things of fixing nitrogen from the air. In order for these nitrifying bacteria to live they must have a 'host' plant. The clovers make them welcome. Were it not for the clovers and the other legumes which are continually restoring to the soil in this way the precious nitrogen used by other plants and animals and lost by the processes of decay, life on this planet would within a few short years become exceedingly difficult."

Yoder, Fred. Rye as a cover crop. Ohio Farmer. 178(2):15. July '18, 1936.

States that "rye makes an excellent cover and green manure crop, when sown on corn ground early in the fall...because it starts quickly and grows luxuriantly both in the fall and spring. Its good growth in the spring supplies an abundance of green manure to plow under."

Drainage

Current land-drainage research. Engin. News-Rec. 116(20): 698. May 14, 1936.

Announces research projects to determine the following: permanency of underdrains; flow of water around bends; optimum depth of drainage for different crops in peat and muck soils and the cost of maintaining these depths; most advantageous depth and spacing of drains for sugarcane land, and the effect of drainage upon yield of cane and sugar; runoff on watersheds.



Erosion

Buio, T. S. Three moves - no gain. Fert. Rev. 11(2):8-9. illus. April-May-June 1936.

Discusses abandoned farms and soil erosion. States that the program for farm reclamation "as planned by the Soil Conservation Service has as its motive the rebuilding and maintenance of the soil for more profitable production in the immediate future. This is done by returning to grass and trees fields that never should have been cultivated. Plowing on the contour and strip-cropping, terracing, gully control, and crop rotation are among the methods employed for erosion control. If in developing a wide-spread program for soil conservation we can make more farmers wise users of the soil the benefits of the program should branch out to every town and city, and to every industry."

Collins, H.H.Jr. Geology and soil conservation. Smilodon 3(2):1-3. June 1936.

A study of accelerated erosion as contrasted with normal geological erosion. States that at present "the problem is to decelerate erosion and deposition; in fact, to reduce these processes as closely as possible to their geologic norms. This is the task set before us. The profession of soil conservation is still in its infancy. Federal expenditures have grown from practically nothing in 1932 to over 45,000,000 dollars for the newly-created Soil Conservation Service in the fiscal year of 1936.

...Control is restricted to no one formula of treatment, but the Service employs in an integrated plan, the best methods now known; agronomy, revegetation, woodland management, erosion surveys, wildlife management, and engineering are all part of the program. The Soil Conservation Service is also engaged in research activities and surveys designed to ascertain the extent of erosion and the most efficient methods of controlling it; it studies the degree and rapidity of siltation and how to cope with it; and it is developing economically valuable erosion resisting trees and shrubs to plant on land that is retired from cultivation."

The article contains suggestions for professional training courses dealing with the various phases of erosion control.

The author is special assistant to the Chief, Soil Conservation Service, United States Department of Agriculture.

Fick, J.C. When the soil crust is washed away. Farming in So. Africa 11(118):16, January 1936.

Discusses erosion from the point of view of the veldt farmer. States that "it is a mistaken idea that the former fertility of the soil may be restored by the application of fertilizers, for although these do supply the missing plant-foods, they are unable to provide the finer and,

(continued on page 3)





Erosion (continued)

Fick, J.C. (continued)

incidentally, the most important soil constituents - the clay and humus particles - and this is the very portion which washes away first and most readily, causing a deterioration in the soil structure.... The results of experiments conducted in America in this connection are highly instructive. All the results were obtained from soil of the same type, on the same slope and with a consistently uniform gradient. Part of the soil had previously been used for lands and here the upper crust was completely washed away, so that the soil used for seed-beds in the experiment was the original sub-soil. This soil was compared with adjoining virgin soil which still retained its upper crust, and it was found that the former yielded only 500 lb. of wheat per morgen, as against 3,200 lb. per morgen, or six times as much, on the latter."

L. H.M. Erosion. Internatl. Sugar Jour. 38(446): 50-52. February 1936.

Discusses erosion in tropical regions and common practices for its control. States that "much experience has been gained in the process of checking erosion and reclaiming ravine lands bordering the rivers of northern India. The process is dual; an earthen embankment is thrown across the ravine at a suitable site and provided with a spillway so designed as to allow the overflow to escape without cutting. At the same time the sides of the ravine are trenched along the contour lines and timber planted in the trenches. In a brief period the area above the dam becomes silted up and the ravine bottom converted into a flat area which can be brought under cultivation. With a little care until established, the timber forms a protective covering to the ravine sides which, with an undergrowth of grass, will prevent further erosion. By a suitable choice of timbers having an economic value a large part of the cost will be ultimately recovered."

Frequent reference is made to an account by R.L. Pondleton of the effects of erosion in the Philippines.

Renner, F.G. Causes of erosion on the Boise River watershed. Science 84(2168):62-63. July 17, 1936.

Presents results of a study conducted by United States Forest Service on 371,313 acres of mountainous watershed to determine effect of gradient upon accelerated erosion, soil conditions, vegetational conditions, rodents as a factor contributing to erosion, and surface conditions as affected by over-grazing. "The results point to the necessity of immediately restoring the plant cover to a density of at least 30 per cent., and initiating improvements in range and live-stock management which will relieve conditions on areas particularly susceptible to erosion. They also indicate the type of more intensive studies needed."





Erosion (continued)

Soil erosion. Planters' Chron. 31(11):247. May 30, 1936.

Reports results of soil erosion investigations at Lya-mungu coffee experimental station, Moshi, East Africa, and top soil erosion control success by use of cover crops and crotalaria hedges planted on low contour bunds 32 feet apart. Points out seriousness of soil erosion as illustrated by official figures of "United States Department of Agriculture and the Interior Soil Erosion Service."

Farm Ponds

McPheters, W.H. The farm pond. Agr. Engin. 17(5):211-214. May 1936.

Describes types and important uses of farm ponds, and gives detailed directions for choice of location, determination of depth and size of pond, preparation of site, and construction of dam and spillway. States that "when all the land in the country is terraced that needs to be terraced, and there is an average of one acre pond of the double-spill type on every 160-acre farm, we will have a good start toward reducing the flood menace so that people living on the bottom lands will be protected. The chances for hot winds will be less; there will be a better chance for shallow wells and springs; there will be more tree growth in the plains area; there will be less shortage of stock water. Good gardens will be possible on most farms in spite of dry weather."

Paper presented before the Soil and Water Conservation Division of the American Society of Agricultural Engineers, Chicago, Dec. 5, 1935.

Tomson, F.D. The coming of farm ponds. Country Gent. 106(5):95. May 1936.

The author, who is a Kansas stockman, discusses briefly the advisability of making ponds on stock farms. States that there is need for ten thousand more ponds in Kansas, "not so much with reference to water supply but an erosion preventive."

Flood Control

Cullings, E.S. Local flood control. New York river regulating district act points to the way in which flood control and river regulation can be directed by local bodies with the cost of the work apportioned among the beneficiaries. Engin. News-Rec. 116(26):915-917. June 25, 1936.

Presents an historical sketch of flood control and river regulation enactments and operations of the state of New York, with reference to district organization, cost apportionment and financing. Includes suggestions for amendments to attain a broader power in construction for local watershed improvements.

The author is Executive Secretary, Black River Regulating District, Watertown, New York.



Flood Control (continued)

Dry humor? Engin. News-Rec. 117(3):96. July 16, 1936.

Announces conference on upstream engineering, called by the President to meet in Washington in September, 1936. Article is an editorial ridiculing forestry and land management projects to control floods.

Liddell, W.A. The 1936 flood in New England and possible control of future floods. N.E.Planning Bull. 1(6)Suppl. 1-12. April 1936.

Owens, G.T. Have Mississippi floods been conquered? Civil Engin. 6(7):431-433. July 1936.

Submits plan for a reservoir system in the Mississippi valley, to retain rainfall as nearly as possible where it falls, and to permit excess of heavy rainfall to enter the Mississippi gradually in such quantities as to prevent floods in the lower basin and erosion in the entire upper valley.

Publicity run wild. Engin. News-Rec. 116(20):713. May 14, 1936.

An editorial criticizing the claim of Soil Conservation Service writers that "erosion control operations have greatly reduced floods on a number of typical headwater streams in our demonstration watersheds."

Grass Seed. Harvesting

Fuller, G.C. Harvesting native grass seed. Agr. Engin. 17(5):195-197. illus. May 1936.

Describes Minahan power stripper for harvesting grass seed. Author states that advantages of power stripper are as follows: 1.It moves under its own power. 2.It may be transported from one field to another without any adjustment. 3.Height adjustment ranges from 6 inches to 4 feet. 4.It is possible to secure cleaner seed because of flexibility of cylinder and hopper. By pulling down on the rope the hopper is raised allowing it to pass over noxious weeds or any other undesirable materials. 5.This adjustment allows machine to be operated upon rough ground. Much of our native seed is harvested in fields where machinery has never been used before. 6.It can be operated by one man.

The author describes also the Hays vacuum machine for harvesting buffalo grass seed. This machine will harvest from 50 to 60 per cent of seed under average conditions and will not damage pastures. For best results, pastures moderately to heavily grazed must be selected from which to harvest seed. A chain drag used on pastures of this nature will slightly increase amount of seed obtained.





Grass Seed. Harvesting (continued)

Zink, F.J. Design of a machine for harvesting buffalo grass seed. Agr. Engin. 17(5):197-198. illus. May 1936.

Describes final design of suction machine for harvesting buffalo grass seed. States that "results in harvesting efficiency were determined by counting the seed on a small area, then sweeping the area and counting the seed remaining. These results were not carried out to more than a preliminary conclusion but only sufficiently to assure that the apparatus was reasonably satisfactory considering the magnitude of the problem. A few of the results were as follows: In 5 quadrats having a total of 92 seeds, efficiency 66 per cent; in 7 quadrats with 240 seeds, efficiency 57 per cent; and in 4 quadrats with 104 seeds, efficiency 68 per cent. In these tests only medium-length turf was attempted because in any case of harvesting these seeds it appears necessary to carefully select the area to be worked or to give some special treatment to the turf. ...While only experimental results are available, there appears to be no reason to doubt the applicability of this machine for extended use."

Land Utilization

Ely, R.T. Land underlies all. Christian Sci. Monitor Mag. Sec., May 20, 1936. pp. 1-2. illus.

Discusses land utilization and balance of economic problems with reference to readjustment of land division for farms and forests. States that losses due to unwise and excessive expansion in utilization of land are far greater than those involved in duplication of public utility plants, that land should be made a public utility and the idea supported by state Supreme Courts.

Gray, L.C. Crop reduction and the land-use program. Agr. Situation 20(7):11-13. July 1, 1936.

Discusses submarginal farm land problems as involved in land-use planning. States that "one of the obvious purposes of the land-utilization program is to bring to an end the destruction of natural resources which the continued occupation of unproductive farms entails. In the southern Appalachians, for example, the cultivation of steep slopes has resulted in the serious erosion and depletion of large areas of land. The restoration of a valuable forest crop on these hillsides is prevented by the operation of farms. Yet under present circumstances the families dependent upon the soil have nothing else to turn to as a source of livelihood. Similar conditions prevail in the more arid portions of the western plains where wind erosion has destroyed not only lands that were unsuccessfully cultivated, but overgrazed pasture, and adjoining lands as well. Soil particles, blown from fallow land, can destroy the sod on nearby areas, the erosion spreading like a cancer. Here again, it has been economic pressure, coupled with other influences, such as the antiquated homestead law, that caused these conditions to come about."





Land Utilization (continued)

Gray, L.C. The social and economic implications of the national land program. Jour. Farm Econ. 18(2):257-280. May 1936.

Discusses federal land policies past and present, with special consideration of problems of confronting the various land utilization and land reclamation agencies of the New Deal. States of the Soil Erosion Service, first set up in the Department of the Interior but recently transferred to the Department of Agriculture that "it has concerned itself with large-scale demonstrations of erosion control practices, primarily on private land under contracts with farmers, and has conducted a reconnaissance survey of erosion conditions throughout the United States."

The article includes a discussion by Noble Clark of the University of Wisconsin, in which need for closer cooperation with state authorities and local people is stressed and a suggested new national land program organization is presented.

State legislation affecting land use enacted since January 1, 1936. Land Policy Circ. June 1936, pp.14-22.

Contains list of state legislatures which have met this year, and those in special or regular session at present time (June 15), with brief digests of important bills dealing with land and land-use.

Pasture Improvement

Bell, H.M. Pastures and soil conservation. Balanced grazing and mechanical assistance in conservation proved valuable by Texas experiment stations. Southwestern Sheep and Goat Raiser 6(16):6-7, 23-24. illus. May 15, 1936.

Contains notes on pasture listing experiments carried out at Spur, Texas experiment station. Results show increase in carrying capacity the second and third years after listing, with complete sod at end of second year.

Helm, C.A. Barley farming. Capper's Farmer 47(8):7, 43. August 1936.

"Winter barley promises to effect a new cropping practice in Missouri. Once its possibilities are recognized and best methods of production are understood, it will quickly take rank with winter wheat and oats in acreage and prominence. On many farms it will replace wheat now grown mainly for its value in soil erosion control and as an agency for establishing meadows in regular crop rotation. It is superior to wheat as a fall pasture, as a nurse crop for clover and grass, and equal to wheat as a cover crop. But the most promising use of winter barley is to replace corn on marginal land where it will be grown chiefly as a feed grain.

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Pasture Improvement (continued)

Helm, C.A. (continued)

...Barley sown early after the removal of soybeans for hay is a better soil erosion control crop than wheat, which on account of danger from hessian fly infestation, cannot safely be planted until later. Thus the soybean (hay)-barley succession will remove the general objection that unrestricted production of soybeans leads to severe soil erosion."

Popping up pastures. Unfertilized open pasture - 3 acres per animal; fertilized and grazed in rotation - 0.85 acres per animal. Hoard's Dairyman 81(13):344. July 10, 1936.

Discusses three methods which have proved successful in improving yields of Wisconsin permanent pastures: 1. applying a complete fertilizer; 2. rotational grazing; and 3. establishing legumes along with bluegrass. "In addition, supplementary pastures of sudan grass for midsummer grazing have proved their value, and are particularly useful where there is no legume-bluegrass combination pasture available."

Precipitation

Crowe, P.R. The rainfall regime of the western plains. Geog. Rev. 26(3):463-484. maps. July 1936.

Presents an analysis of an objective precipitation study in the North American western plains, on a relative basis. Precision is given to the conception of a Plains type of rainfall, and the graphical method is employed to show precipitation and temperature ratios, comparison of differential indices and significant rainfall changes, rainfall dispersion, and rainfall provinces of the western plains.

Pettis, C.R. Relation of rainfall to flood run-off. Military Engin. 28(158):94-98. March-April 1936.

Presents a study in which the relation of rainfall to flood run-off is reduced to a simple mathematical basis, so that the general principles can be understood by one who is familiar with the current literature on the subject. The probable 100-year flood, or the probable maximum discharge to be expected on the average once in each period of 100 years, is used as the basis of the discussion.

Reforestation

Obligatory reforestation in Cuba. Bull. Pan Amer. Union 70(6):521-522. June 1936.

Describes provisions of Cuban reforestation law passed March 21, 1936, with regard to location of prospective plantings, nurseries and hatcheries, conservation and propagation of rare trees, animal and bird refuge, forest laboratory, and cutting prohibitions.





Research

Regional research laboratories under the Bankhead-Jones Act. Exp. Sta. Rec. 75(1):1-3. July 1936.

States that "at the time of writing, three regional stations had been definitely provided for. In the order of their announcement these include a vegetable breeding laboratory near Charleston, S.C.; a cooperative soybean industrial research laboratory at Urbana, Ill.; and a grass breeding and pasture laboratory at State College, Pa. ...Facilities have been made available by the Pennsylvania Experiment Station, which has had under way pasture studies and other relevant work for several years. Among the objectives is the establishment of a nursery of all grasses and legumes adapted to the region. Breeding experiments to develop new and better grasses will be confined at first to Kentucky and Canada bluegrass, timothy, and white and red clover, but work on other species may be undertaken as circumstances permit. The laboratory also expects to determine the seasonal productivity of various legumes and grasses alone and in mixtures, to measure the effect upon growth, chemical composition, feeding value, and production of factors such as soil moisture, soil temperature, soil fertility, length of day, and light intensity, and to study important grasses and legumes as to their resistance to disease and drought, their life history, their growth and development, and their reactions to fertilizers. The leader of the general project is P.V. Cardon, in charge of the Division of Forage Crops and Diseases of the Bureau of Plant Industry.

The establishment of additional regional stations is under consideration, and in due time and with increasing funds provision will doubtless be made to meet the needs of regions not now covered and for extension of work to other fields of research."

Silt

A reservoir silting case. Engin. News-Rec. 116(20):695. illus. May 14, 1936.

"Neubert Springs Dam, a 15-ft. earth embankment built in 1921 to form a millpond of 2-1/2 acres 7 miles south of Knoxville, Tenn., when washed out by a flood on March 24 was found to have accumulated silt in the 15 years of its existence to within about 2 ft. of pond level, or 85 per cent full. The deposit totaled about 25,000 cu.yd. or 15-1/2 acre-feet - about 1 acre-foot of deposit per year, according to estimates made by engineers of the Tennessee Valley Authority."



Soil Blowing Control

Singleton, R.C. One day plus one hour. Mont. Farmer 23(16):3,31. May 15, 1936.

Advises planting of caragana hedges for field shelter-belts in northwest prairie regions, and suggests plan by which each farmer may devote one day per year per quarter section of land to planting trees crosswise of the prevailing winds in an effort to prevent soil blowing.

Strip farming has limitations. Mont. Farmer 23(17):4. May 1, 1936.

An editorial discussing tree planting and sod stripping to supplement strip farming in areas where soil is susceptible to drifting.

Soil Conservation

Conservation gone wild. Amer. Cattle Producer 17(11):15. April 1936.

An editorial objecting to the soil-conservation program to reclaim plains and prairie grasslands. States that "all this would mean that you, the stockman, forcibly retired from business, could devote your time to watching wild animals grazing on a permanent pasture. You would be relegated to a niche just below the order of wild game. Your industry, which has in many areas been the biggest taxpayer, built the schools, laid out the roads, and furnished the main support of local and state government, would be sidetracked to develop the absurd ideas of these whimsical penmen. Not only would all progress in the development of the West be stopped, the clock would be turned back half a century. On this subject we shall hope to have nothing more to say - it is too ridiculous!"

Gethin-Jones, G.H. Conservation of soil fertility on coffee estates with special reference to anti-erosion methods. East African Agr. Jour. 1(6):456-462. May 1936.

"Generally speaking, all problems in connection with the general fertility of a coffee soil can best be dealt with by preventing soil erosion and maintaining the humus content of the stationary surface soil."

The author is soil chemist, Department of Agriculture, Kenya.

It will blow again. Country Gent. 106(8):20. August 1936.

An editorial stressing importance of soil conservation practices in the high prairies of the Southwest for prevention of future serious droughts. Points out suggestion of Louis C. Aicher, superintendent of Fort Hays experiment station as quoted: "we urgently need to make a comprehensive survey of soils throughout the winter wheat belt - to determine accurately which areas can be cropped and which will be forever unsafe for tillage. Not until such

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Soil Conservation (continued)

It will blow again (continued)

a survey is made can the job be tackled with scientific intelligence. In short, a period of more moderate climate should be a time of learning, not a time of forgetting."

Poe, Clarence. Reviewing the world's news. America's most important 1936 campaign summarized. Prog. Farmer, Texas ed. 51(8):38. August 1936.

Author, who is president, Progressive Farmer-Ruralist company, discusses the nation-wide campaign to save the soils of America as "the most important issue of the 1936 campaign", and presents a suggested eight-plank soil-building platform dealing with the following: interest of farm people; climatic influences on land, need for soil humus; soil washing; livestock; forest fires; abandoned crop lands; and, home ownership.

Also in Prog. Farmer (Car.Va.ed)51(8):38. August 1936.

Roe, H.B. Present status of soil erosion control program. Implement and Tractor 51(11):14. May 30, 1936.

Explains the various methods and agencies of the national program for soil conservation and the reasons for the inclusion of the following: vegetative and engineering methods; land classification; crop rotation; controlled grazing; other sound farm management practices; economic studies; rodent control; wildlife conservation; weed, insect, and disease control in field plantings.

Weir, W.W. Hillside soil conservation. Pac. Rural Press 131(11):350-351. Mar. 14, 1936.

Discusses in general hillside erosion control in California including methods used by Soil Conservation Service advisers and workers in their system of contour irrigation and permanent cover crops for the Placerville area.

Soil Moisture

Friesner, R.C. and Potzger, J.E. Soil moisture and the nature of the Tsuga and Tsuga-Pinus forest associations in Indiana. Butler Univ. Bot. Studies 3(10-15):207-209. May 1936.

Includes tabulations showing average available moisture in Tsuga or Tsuga-Pinus and Fagus-Acer associations, May to October; and, time in weeks during which soil moisture is below wilting coefficient in Fagus-Acer and Tsuga or Tsuga-Pinus associations. States in conclusion that "if these soil-moisture relations are definitive of the type of forest-climax relict, then Tsuga and Tsuga-Pinus associations in Indiana must be considered to be pre-climax relicts, since they inhabit here more xerophytic situations as vegetative islands surrounded by more mesophytic Fagus-Acer areas."

Literature cited at close of article.





Soil Moisture (continued)

Deep cultivation. Gardeners' Chron. 3d. ser. 99(2579):343.  
May 30, 1936.

Discusses part played by the subsoil in water-storage  
and as a reservoir of soluble nitrogen (nitrates).

Soil Organic Matter

Burrows, William, and Cordon, T.C. The influence of the  
decomposition of organic matter on the oxidation-reduc-  
tion potential of soils. Soil Sci. 42(1):1-10. July  
1936.

Summary: "The experimental evidence presented here indi-  
cates that the type of decomposable organic matter present  
in the soil is a highly important factor in the determina-  
tion of the degree of reducing intensity that will prevail.  
Decomposition of casein was found to result in strongly posi-  
tive potential levels, whereas decomposition of carbohydrate  
produced more negative, but not extremely negative, potentials  
which do not appear to differ greatly from those produced in  
standing soil to which no organic matter was added. The ef-  
fect of moisture content on potentials developed in standing  
soils was found to be negligible."

References at close of article.

Terracing

Daniel, H.A. Results of terracing and contour cultivation.  
Yield of Tepary bean hay in the southern high plains was  
considerably increased. Farm and Ranch 55(5):1,7. illus.  
Mar. 1, 1936.

Presents results of an experiment to compare the yield  
of Tepary bean hay grown on terraced and contour cultivation  
plots with that grown on unterraced land.

Hamilton, C.L. Terrace project planning. Agr. Engin. 17(5):  
205-208. illus. May 1936.

Paper presented before the Soil and Water Conservation Div-  
ision of the American Society of Agricultural Engineers, at  
Chicago, December 5, 1935 outlines general engineering con-  
siderations necessary in developing field plans for a suc-  
cessful terracing project: reconnaissance survey and pre-  
liminary map; general principles to be observed in the  
final planning of a terracing project; terrace spacing,  
grades and length; staking and plowing out terrace system;  
realignment of terrace lines.

The water goes round and round. Pac. Rural Press 131(11):  
344. Mar. 14, 1936.

Describes successful terraces for ranch lands, for pro-  
tection against erosion and moisture conservation.



Terracing (continued)

Wooley, J.C. Erosion control in terrace outlets. Agr. Engin. 17(5):208-209. illus. May 1936.

Describes terrace outlet structure which was made of rubble masonry laid up in concrete mortar and plastered. As extra precaution against seepage, the earth was cut to shape for the structure and a coating of road oil applied before concrete was started. Flume carrying the water down the 45-degree slope was built of rubble masonry and plastered smooth.

Paper presented at a symposium on engineering phases of soil erosion control, Soil and Water Conservation Division of the American Society of Agricultural Engineers, Chicago, December 5, 1935.

Water Conservation

Activities and aims of the water resources committee. In pursuing its major objective of coordinating operations of central and local agencies concerned with water resources development, the committee is concerning itself with basic hydrolic data, balanced river regulation, stream pollution, drainage and water storage. Engin. News-Rec. 117(2):42-43. July 9, 1936.

Includes recommendations for policy of the Water Resources Committee, and discussion of tentative future program.

Beeler, M.N. Safety methods for plains wheat. New system gives control of the two most important production factors - moisture storage and wind and water erosion. Capper's Farmer 47(8):8-9, 31. illus. August 1936.

Presents details of summer fallowing methods suitable for plains farming. States that "since the only method of storing moisture is thru summer fallowing, that practice is an essential part of the system. Methods of fallow differ, but the purpose and the effect are the same from the southwestern to the northern plains. Standard procedure recommended by the Fort Hayes Experiment Station in Kansas will apply with modification to suit local conditions throughout the Plains winter wheat section. And the basic principles will apply in the spring wheat sections of the area."

Currie, J.H. Progress of the water plan. Pac. Rural Press 131(11):345. Mar. 14, 1936.

Discusses progress of the Central Valley Water Plan in construction of dams in the Sacramento river and at various other locations in the San Joaquin valley for redistribution of water and control of floods.

Largest irrigation laboratory dedicated. West. Farm Life 38(13):7. illus. July 1, 1936.

Announces completion of modern hydraulics laboratory at Colorado State College. "Besides being equipped to study

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Water Conservation (continued)

Largest irrigation laboratory dedicated (continued)  
and check problems related to the construction of huge dams, the laboratory will be used to solve irrigation and water problems for farmers, ditch companies and cities, and to develop useful irrigation devices such as the Parshall flume and sand traps. There are also facilities for fundamental scientific research, and a station for conditioning meters for measuring the rate of water flow in streams."

Staples, R.R. Vegetation types and water supplies.

East African Agr. Jour. 1(6):453-455. May 1936.

Discusses forest cover, deciduous scrub types of vegetation, and grass cover with reference to efficiency in conservation of moisture in the soils of East Africa. Some tentative conclusions derived from investigations are as follows: 1. The clearing of the riverine forest appeared to increase markedly the dry-season flow of the stream. 2. The deciduous scrub type of vegetation, seemingly through its larger bulk of foliage, appeared to have a higher transpiration requirement than the grassland under the same conditions. 3. With a seasonal rainfall of 25 inches, moisture was found to penetrate to an average depth of only about 3 feet under deciduous scrub, whereas it penetrated almost 6 feet in the adjacent grassland. 4. As soon as the rains stopped, the soil moisture under the scrub vegetation appeared to be depleted at an astonishingly greater rate than under grass.

Tibbotts, F.H. Water conservation in the Santa Clara Valley is accomplished by rolled earthfill dams. Falling water level threatens rich agricultural area in California - six dams built to conserve flood flows for underground storage - 3,500,000 cu.yd. of fill handled by tractor-scraper units. West. Construction News 11(5):154-158. illus. May 1936.

Describes geological formations of the area, foundation preparations for dam construction, general design requirements, and details of the six dams. Contains table presenting data on Santa Clara Valley water conservation district reservoirs.

Tschudy, L.C. Lakes in rural communities. Agr. Engin. 17(5):209-211. illus. May 1936.

Paper presented before Soil and Water Conservation Division of the American Soc. of Agr. Engin. Chicago, December 5, 1935, deals with water and soil conservation policies and problems in northern portion of Great Plains states. Gives brief picture of needs in rural communities for lakes where grazing land covers thousands of acres, practically all of which are overgrazed. "Overgrazed land blows, and

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Water Conservation (continued)

Tschudy, L.C. (continued)

soil losses increase with poor grazing land resulting. Dams spotted at needed places help to result in more efficient use of the grazing land..... Dams located in flat bottom land help to develop yearly alfalfa and wild hay supplies. Dams located near cities help to raise the water table and result in public benefit to communities."

Author describes the ideal design for small earthen dams used in construction of small lakes.

Wildlife Management

Errington, P.L. Iowa experiments with quail. Outdoor Amer. n.s. 1(7):4-5, 16. May 1936.

Discusses restoration of quail as dependent upon farmer, sportsman, and soil erosion control agencies. States that "there is no panacea in sight, but erosion control may be the nearest approach to one. Erosion control may be closely linked with quail management, or vice versa, and this combination stands far above everything else in promise."

Grinnell, J. Why we need wild birds and mammals. The relationships which have been set up through the ages between birds, mammals and plants cannot be disturbed without serious consequences. Conservation 2(3):7. illus. June 1936.

Discusses importance of birds and mammals in dispersal of trees and shrubs.

Condensed from Sci. Mo. 41(6):553-556. December 1935.

Hamerstrom, F.N.Jr. A study of the nesting habits of the ring-necked pheasant in northwest Iowa. Ia. State Coll. Journ. Sci. 10(2):173-199. January 1936.

Presents "the data now in hand on one phase of the wildlife research program of Iowa State College; namely, the study of the nesting habits of the English or ring-necked pheasant (*Phasianus colchicus torquatus* Gmelin). ...With the tremendous reduction in the numbers of the native prairie chicken which has accompanied the later stages of the agricultural development of Iowa, the pheasant, at least in the northern half of the state, has come to assume great importance to the hunting public. So much interest and importance have been attached to this bird that pheasant management has become a major item in Iowa's fish and game program. ...The general purpose of the work has been to attempt to gain some insight into the ecologic aspects of pheasant nesting, as an aid to the formulation of definite recommendations for pheasant management in Iowa. The present paper deals with the findings to date."





Wildlife Management (continued)

Lang, Douglas. Constructing game coverts, a paying form of forestry. The Field (London) 167(4341):516. illus. Mar. 7, 1936.

Contains suggestions for maintaining coverts for wild and tame pheasants, including notes on the food, habits and diseases which attack these birds in improper habitat. "In a few words the ideal pheasant covert should provide in order of importance shelter and protection from cold winds, rain and snow; suitable evergreen trees for roosting, the branches of which are rough and horizontal, and which form a thick canopy overhead; smaller trees and shrubs which not only provide protection and shelter on the ground, but bear a mass of natural food; and, finally, wide glades and open spaces in which the birds can sun themselves and feed on the natural grasses. If water also is present, that is an additional excellence, but its absence will not be of great moment if there is an abundance of natural food, as birds undoubtedly extract an enormous amount of liquid from it, which, in the case of wild pheasants, appears to be all-sufficing."

Morton, J.N. A game restoration job for everyone. Simple ways in which you can help improve wildlife conditions. Pa. Game News 7(2):4-7,24. illus. May 1936.

Discusses cover, food and protection for wild animals and birds in Pennsylvania, and includes sketches showing various devices for construction of coverts on farms and for flushing during harvest.

Vorhies, C.T. Wildlife aspects of range rehabilitation. Hoofs and Horns including Ariz. Wild Life 5(8):6-7, January 1936; 5(9):10-11, February 1936.

Discusses rodent control from the point of view of economic waste in the range rehabilitation programs.

RECENT LIBRARY ACCESSIONSBooks and Pamphlets

American farm bureau federation. Institute of irrigation agriculture. Proceedings of, fifth annual conference, Hotel Newhouse, Salt Lake City, March 11, 12, 13, 1936. 100 numb. 1. Chicago, American farm bureau federation, 1936.

Partial contents: Resolutions adopted at the conference: pp.1-6; Some basic information relating to the hydrology of the region west of the 100th meridian, including a study

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Books and Pamphlets (continued)

American farm bureau federation. (continued)

of some methods and results of snow surveying, by G.D. Clyde: pp.7-24; How the great plains area is meeting the problems of irrigation pumping, by G.S.Knapp: pp.35-40; Research and investigational work on irrigation and drainage in the western states, being part of a report to the Executive council, by W.W. McLaughlin, C.S. Scofield and O.W. Israelson: pp.41-53; Analysis of national resources committee report on water, by R.B. West: pp.68-82.

American society of horticultural science. Proceedings... thirty-second annual meeting, St. Louis, Missouri, December 30, 31, 1935 and January 1, 1936. 742pp. Geneva, N.Y. The Society, May 1936.

Partial contents: The effect of decreasing soil moisture supply on size of lemon fruits, by C.A. Taylor and J. R. Furr; The influence of mulching apple trees on the moisture-holding capacity of the topsoil, by Damon Boynton and L.P. Batjer; Some relationships of cultural systems to soil organic matter by Leon Havis and J.H. Gourley; The effect of orchard plants on subsoil moisture, by C.C. Wiggans.

Hawley, R.C. The practice of silviculture, with particular reference to its application in the United States of America. 3d ed., 340 pp. illus. rewritten and reset. New York; J. Wiley & sons, inc; London, Chapman & Hall, limited, 1935.

Joffe, J.S. Podology. 575 pp. New Brunswick, N.J., Rutgers university press, 1936.

Kinkaid, J.C. Press photography. 281 pp. Boston, American photographic publishing co., 1936.

The author states in the preface that he has "endeavored to make this book the most complete text on press work available."

Poincare, Henri. The foundations of science. 553 pp. New York, The Science press, 1929.

Salisbury, R.D. ...Physiography. ...3d ed., rev. 676 pp. New York, H. Holt and company [1931]

Sherlock, R.L. Man's influence on the earth. 256 pp. London, T. Butterworth ltd. [1931]





Books and Pamphlets (continued)

Thompson, W.R. Veld burning: its history and importance in South Africa. Univ. Pretoria. Pub. 31. 19 pp. Pretoria, 1936.

Literature cited: p.19.

In reviewing the case for and against burning in South Africa the question is considered from several viewpoints, viz.: the ecological, the hydrological and the veld management aspects.

"In general there is ample reason to believe that burning has played a dominant role in changing and modifying the vegetal cover in South Africa...The results, so far as they go, confirm the general opinion, that burning is detrimental from the hydrological point of view. It apparently increases run-off, encourages direct evaporation and, together with factors such as overstocking...has probably contributed to the desiccation which some claim is taking place in certain areas. The effect on the vegetal cover of possible increased moisture losses through burning is apparent...Apart from mountain slopes, indiscriminate abuse of vegetation by burning must generally be condemned; yet judicious burning is often necessary and advantageous from the veld management point of view."

Washington state horticultural association. Proceedings of the thirty-first annual meeting...held December 9, 10, 11, 1935 at Wenatchee, Washington. 196 pp. [Pullman, Wash.? 1936,

Partial contents: Humus and cover crops in relation to orcharding, by R.E. Stephenson: pp.59-64; Orchard cover crops, by O.M. Morris: pp.65-67.

STATE PUBLICATIONS

Howe, F.B. and Adams, H.R. Soil erosion in New York. N.Y. state col. agr. (Cornell) Bull. 347. 48 pp. illus. Ithaca, 1936.

"Soil erosion is serious on much of the agricultural land of New York."

There is included a reconnaissance erosion survey map of the state of New York.

U.S. GOVERNMENT PUBLICATIONS

Jones, L.A. Drainage investigations by the United States Department of Agriculture. 16 pp., nineogr. Washington, U.S. Bur. Agr. Eng., 1936.

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Jones, L.A. (continued)

Paper delivered before the 50th anniversary convention of the Illinois society of engineers at Urbana, Illinois, January 30, 1936.

Subjects covered are as follows: Run-off investigations; hydraulic factors of drainage channels; rainfall intensity-frequency data; soil erosion control.

U.S. Agricultural adjustment administration. Soil conservation - its place in national agricultural policy. 27pp. Washington, D.C., 1936.

"The present pamphlet is an effort to meet a long-felt need for a clear exposition of the more important economic aspects of the soil conservation problem and their relations to other elements of national agricultural and industrial policy" - Preface signed by H.R.Tolloy.

U.S. Engineer dept. Ohio river...a letter...submitting a report...containing a general plan for the improvement of the Ohio river for the purposes of navigation and efficient development of its water power, the control of floods, and the needs of irrigation... 194 pp. Washington, U.S.Govt. print. off., 1936.

U.S. Resettlement administration. America's land. 30pp. illus. Washington, U.S.Govt. print.off., 1936.

"The purpose of this booklet is to describe what one governmental agency, the Resettlement Administration is doing to preserve the riches of America's land for the America that is to come" - R.G. Tugwell in preface.

U.S. Tennessee valley authority. Report to the congress on the unified development of the Tennessee river system. 105 pp. illus. Washington, U.S. Govt. print. off., 1936.

The report is divided into 4 parts.

The following paragraph headings designate the subject matter of interest: Flood control, p.16-19; Soil conservation, p.26-28; The land, p.49-51; Water control through forest cover, p. 51-52; Water control through farm crop cover, p.52-53.

U.S. Tennessee valley authority. Soil, the nation's basic heritage; a story of the restoration of natural water control through conservation and improvement... 58 pp. Washington, U.S. Govt. print. off., 1936;

